

**Supplemental Figure 2.** CD spectra of (6'R,6R)-  $\varepsilon$ , $\varepsilon$ -carotene-3,3'-dione prepared from lactucaxanthin (solid line), lactucaxanthin (dashed line), and 3'-hydroxyl- $\beta$ , $\varepsilon$ -carotene-3-one isolated from the reaction mixture of lutein with liver postmitochondrial fraction (dotted line), in ethanol.